AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Cancelled).

2. (Previously Presented) The molding method according to claim 5, wherein the compressing of the lens preform is conducted in vacuum.

3. (Withdrawn) Apparatus for molding a microlens array, whereby a microlens array is molded by heating and compressing a glass element, comprising

oppositely placed first and second cores each having a compression molding surfaces between which surfaces a microlens array is moldable by heating and compression;

a depression or projection part formed on the compression molding surface of at least one of the first and second cores for transferring and molding a plurality of convex or concave lens elements;

a middle plate having a hole at its center; and

the hole being adapted to have the glass element set therein, and at least one of the cores having a tip including the compression molding surface of said core, the tip being disposed so as to be able to ascend or descend in the hole;

whereby the apparatus is adapted to compression mold the glass element by means of said compression molding surfaces and the inner peripheral surface of the hole of the middle plate by moving said compression molding surfaces of both cores in a relatively closing direction.

4. (Withdrawn) The molding apparatus according to claim 3, further comprising means for maintaining a vacuum state during the compression molding of the glass element.

5. (Currently Amended) A method of molding a micro-lens array comprising:

obtaining a lens preform;

obtaining first and second molding cores, each including an end part, and obtaining an intermediate restrictor;

wherein:

each molding core comprises a compression molding surface disposed on said end part;

at least one of said molding surfaces comprises depressions or projections for transferring and molding a plurality of convex or concave lens elements into said preform;

said intermediate restrictor comprises a predetermined outer radial dimension and an opening defining an inner peripheral surface which forms an inwardly facing radial boundary, said outer radial dimension being greater than an outermost radial dimension of both of the first and second cores;

said end part of said first molding core has a radially outer dimension which receivably and conformably fits into the opening of said intermediate restrictor so as to be operable to traverse an axial extent of said inner peripheral surface during molding, said inner peripheral surface having a substantially constant diameter over said axial extent; and

said end part of said second molding core comprises a platform for positionably supporting said intermediate restrictor;

said method further comprising:

positioning said intermediate restrictor on said end part of said second molding core so that an axis of said second molding core is collinear with an axis of said opening;

positioning said lens preform and said end part of said first molding core within said opening of said intermediate restrictor so that said end part of said first molding core opposes said end part of said second molding core and an axis of said first molding core is collinear with an axis of said opening, a receiving area bounded by the radial boundary of said restrictor being greater than a corresponding area

occupied by the lens preform prior compression molding, thereby defining a gap between a periphery of the lens preform and said inner peripheral surface; and

heating and compression molding the lens preform between said molding surfaces of the first and second molding cores by advancing said end part of said first molding core in a direction of said second molding core to traverse said axial extent of said inner peripheral surface, said compression molding being effective to force material of the lens preform radially outward to contact the inner peripheral surface, while said inner peripheral surface operates to prevent the material of the lens preform from escaping in an outward direction perpendicular to a compression direction of the lens preform.

6. (Cancelled)

7. (Previously Presented) The method of molding according to claim 5, wherein said end part of said first molding core has a smaller outer radius than said outermost radial dimension of said second molding core.

8. (Previously Presented) The method of molding according to claim 5, wherein said end part of said first molding core has a smaller outer radius than said outermost radial dimension of said first molding core.

9. - 10. (Cancelled).

11. (Previously Presented) The method according to claim 5, wherein at least a portion of said intermediate restrictor is between said first molding core and said second molding core.

12. (Previously Presented) The method according to claim 5, wherein said intermediate restrictor on said end part of said second molding core is positioned to restrict a flow of said lens preform during said heating and compressing of said lens preform so as to mold said lens preform to closely conform to each of said depressions or projections to thereby homogenize an optical performance of lens elements disposed in a central area of said lens preform and lens elements disposed in a peripheral area of said lens preform.

13.-18. (Cancelled)

19. (Previously Presented) The method according to claim 5, wherein said intermediate restrictor on said end part of said second molding core is positioned to restrict a flow of said lens preform during said heating and compressing of said lens preform so as to homogenize an optical performance of lens elements disposed in a

central area of said lens preform and lens elements disposed in a peripheral area of said lens preform.

20. (Cancelled)

21. (Currently amended) A method of molding a micro-lens array, comprising:

providing a first core and a second core having respective compression molding surfaces opposed to one another;

forming [[a]] depression or projection [[part]] <u>parts</u> on at least one of said compression molding surfaces configured for molding at least one of <u>corresponding</u> convex or concave lens elements;

providing a restrictor with structure including an opening bounded by an inner peripheral surface, at least a portion of a one of said first core or said second core being conformably receivable within said opening when said first and second cores are urged together to bring said molding surfaces closer to one another;

setting a lens preform in said opening in said restrictor between the compression molding surfaces of the first and second cores;

heating said first and second cores, said restrictor and said lens preform; and

compression molding the lens preform between the compression molding surfaces of the first and second cores while said lens preform is surrounded by said

inner peripheral surface, a receiving area bounded by the inner peripheral surface of said restrictor being greater than a corresponding area occupied by the lens preform prior to the compression molding, thereby defining a gap between a periphery of the lens preform and said inner peripheral surface, said inner peripheral surface having a substantially constant cross-section over at least an axial extent thereof traversed by said at least the portion of said one of said first core or said second core during said compression molding, said compression molding being effective to force material of the lens preform radially outward to contact the inner peripheral surface, said inner peripheral surface operating to prevent the material of the lens preform from escaping in a direction perpendicular to a compression direction of the lens preform.

22. (Currently amended) The method according to claim 21, wherein said each of said lens ~~element~~ elements comprises a glass element.

23. (Previously presented) The method according to claim 21, wherein said opening is circular.

24. (Previously presented) The method according to claim 21, wherein said opening is rectangular.

25. (Previously presented) The method according to claim 21, wherein at least one of said first core or second core corresponding to at least one of said compression molding surfaces for molding at least one of the convex or the concave lens elements is comprised of stainless steel.

26. (Previously presented) The method according to claim 21, wherein said compression molding is conducted in a vacuum.

27. (Previously presented) The method according to claim 21, further comprising charging nitrogen gas into a surrounding part of the first and second cores and the restrictor to cool micro-lens array produced from the lens preform after said compression molding.

28. (Previously presented) The method according to claim 21, wherein said at least the portion of the one of said first core or said second core comprises a tip part thereof which is inwardly displaced radially from a remainder of said one of said first core or said second core.